## REMARKS

Claims 1-20 are pending in the application. Claims 1-2, 10, 12-13 are herein amended. No new matter has been entered.

**Rejections under 35 USC §103(a)**

**Claims 1-3, 5-10, 12-14, and 16-20 were rejected under 35 U.S.C. 103(a) as being obvious over Levine (U.S. Patent No. 4,666,796) in view of Kim et al. (U.S. Publication No. 2003/0104651 A1) and Suzuki (Japanese Publication No. 2005-123297A).**

The Examiner alleged as follows:

> Suzuki discloses a first layer contains a diffusion accelerator (see Paragraph [0033]-[0034]; Cobalt is a diffusion accelerator).
> Suzuki fails to disclose a solder layer mainly composed of Sn formed on a region of the surface of said second layer to which said electronic component storing member is bonded, wherein said second layer has a function of inhibiting said first layer from diffusing into said solder layer at a first temperature while diffusing said first layer into said solder layer through said second layer when said solder layer bonds to said electronic component storing member at a second temperature higher than said first temperature.

(Office Action page 3). However, Suzuki describes as follows:

> [0033]
> In this case, if the gold layer 11 is less than 0.1 μm, it tends to become difficult to effectively prevent the oxidation corrosion of the nickel layer 9 or the nickel cobalt layer 10. If the thickness exceeds 3 μm, when the metal lid body 2 is joined to the metallized layer 6 for closure by seam welding, the current which flows into the thick gold layer 11 increases while the current which flows into the metal lid body 2 decreases, and there is a possibility that melting of the solder material 8 may be barred and the intensity of junction may deteriorate. Therefore, it is preferred to make the thickness of said gold layer 11 in the range of 0.1 μm - 3 μm, and the range 0.1 μm - 2 μm is further preferred.

> [0034]
> According to the wiring board of this invention, because the nickel cobalt layer 10 is formed directly under the gold layer 11, a cobalt component inhibits diffusion of nickel components, it rarely happens that some nickel of the nickel layer 9 or the nickel cobalt layer 10 diffuses through the gold layer 11, being exposed on the surface of the gold layer 11 and oxidized to generates a nickel oxide and nickel hydroxide with poor wettability to the solder material 8; thus firm junction to the metallized layer 6 and the solder material 8 is constantly obtained.

(Suzuki, paragraph [0033]-[0034], revised from machine translated version). Thus, according to Suzuki, when the gold layer is the solder layer, the order of the layers is Ni/ Ni-Co/solder layer. In contrast, according to claim 1, when the diffusion accelerator is Co, the order of the layers is N-Co/Ni/solder layer. Thus, the order of the layers is different between Suzuki and the present invention. Therefore, it is clear that the layers of Suzuki do not satisfy "wherein said second layer is formed so as to inhibit said first layer from diffusing into said solder layer at a first temperature and diffuse said first layer into said solder layer through said second layer when said solder layer bonds to said electronic component storing member at a second temperature higher than said first temperature."

Moreover, Suzuki says that the cobalt composition inhibits diffusion of nickel component through the gold layer. In contrast, cobalt is contained as an example of diffusion accelerators in the present invention.

Also, the Examiner alleged that "Kim discloses a solder layer mainly composed of Sn formed on a region of the surface of said second layer to which said electronic component storing member is bonded" referring to paragraph [0031]-[0032]. Kim et al. describes, at the cited portion, as follows:

> [0031] The lid frame 2 may be formed of a transparent material, such as glass, quartz, or a material, such as Si, ceramic, and Kovar, and the junction layer 5 may be formed of Cr or Ti. Preferably, the wetting layer 6 is formed of Ni and Cu, and **the solder layer 7 is formed of at least one selected from In, Sn, Bi, Ag, and Zn**, and the first protection layer 8 is formed of Au. Also, the thickness of the first protection layer 8 is, preferably, but not necessarily, less than 1000Å.
> [0032] The junction layer 5, the wetting layer 6, and the solder layer 7 are laminated through heat or e-beam evaporation, sputtering, electroplating, non-electrolysis deposition, and screen printing and are manufactured in a high vacuum apparatus so as to prevent the oxidation of each layer.

(Kim et al., paragraph [0031]-[0032]). Thus, Kim et al. simply describes Sn as an example of the materials to form a solder layer of a particular lid frame.

Therefore, even if Levine is combined with Suzuki and Kim et al., there is no reason to make a sealing cap comprising "a substrate; a first layer, formed on the surface of said substrate, mainly composed of Ni containing a diffusion accelerator; a second layer formed to be in contact with the surface of said first layer; and a solder layer mainly composed of Sn formed on a region of the surface of said second layer to which said electronic component storing member is bonded, wherein said second layer is formed so as to inhibit said first layer from diffusing into said solder layer at a first temperature and diffuse said first layer into said solder layer through said second layer when said solder layer bonds to said electronic component storing member at a second temperature higher than said first temperature."

For at least these reasons, claim 1 patentably distinguishes over Levine, Suzuki and Kim et al. Claims 2, 3, and 5-9, depending from claim 1 patentably distinguish over Levine, Suzuki and Kim et al. for at least the same reasons.

For the substantially same reasons, independent claims 10 also patentably distinguish over Levine, Suzuki and Kim et al.

Similarly, regarding claim 12, none of Levin, Kim et al. and Suzuki discloses or suggests, among other things, "forming a solder layer mainly composed of Sn at a first temperature on a region of the surface of said second layer to which said electronic component storing member is bonded, with the second layer inhibiting said first layer from diffusing into said solder layer at the first temperature, wherein said second layer is formed such that said first layer diffuses into said solder layer through said second layer when said solder layer bonds to said electronic component storing member at a second temperature higher than said first temperature." For at least these reasons, claim 12 patentably distinguishes over Levine, Suzuki and Kim et al.

Claims 13, 14 and 16-20, directly or indirectly depending from claim 12, also patentably distinguish over Levine, Suzuki and Kim et al. for at least the same reasons.

**Claims 4 and 15 were rejected under 35 U.S.C. 103(a) as being obvious over Levine (U.S. Patent No. 4,666,796) in view of Kim et al. (U.S. Publication No. 2003/0104651 A1) and Suzuki (Japanese Publication No. 2005-123297 as applied to claims 1-3 and 12-14 above, and further in view of Woolhouse et al. (U.S. Patent No. 4,236,296).**

Claim 4, depending from claim 1, and claim 15, indirectly depending from claim 12, patentably distinguish over Levine, Suzuki and Kim et al. for at least the same reasons as discussed above.

Woolhouse et al. has been cited for allegedly disclosing second layer has a thickness of at least 0.03 pm and not more than 0.075 pm. However, such a disclosure of Woolhouse et al. does not remedy the deficiencies of Levine, Suzuki and Kim et al.

For the substantially same reasons, claims 4 and 15 patentably distinguish over Levine, Suzuki, Kim et al. and Woolhouse et al.

**Claim 11 was rejected under 35 U.S.C. 103(a) as being obvious over Levine (U.S. Patent No. 4,666,796) in view of Kim et al. (U.S. Publication No. 2003/0104651 A1) and Suzuki (Japanese Publication No. 2005-123297 A) as applied to claim 10 above, and further in view of Shiomi et al. (U.S. Publication No. 2004/0023487 A1).**

Claim 11, depending from claim 10, patentably distinguishes over Levine, Suzuki and Kim et al. for at least the same reasons as discussed above.

Shiomi et al. has been cited for allegedly disclosing the junction between said hermetic sealing cap and said electronic component storing member contains an intermetallic compound consisting of an Ni-Sn alloy. However, such disclosures of Shiomi et al. do not remedy the deficiencies of Levine, Suzuki and Kim et al.

For the substantially same reasons, claim 11 patentably distinguish over Levine, Suzuki, Kim et al. and Shiomi et al.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**

/SADAO KINASHI/

Sadao Kinashi
Attorney for Applicants
Registration No. 48,075
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

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